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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/705,867	11/13/2003	Stephane M. Arsenault	16358.14.1	6300

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ART UNIT	**PAPER NUMBER**
2863	

MAIL DATE	DELIVERY MODE
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Please find below and/or attached an Office communication concerning this application or proceeding.

The time period for reply, if any, is set in the attached communication.

Office Action Summary	Application No.	Applicant(s)	
	10/705,867	ARSENAULT ET AL.	
	Examiner	Art Unit	
	XIUQUIN SUN	2863	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE *3* MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

1)☒ Responsive to communication(s) filed on *14 January 2008*.

2a)☐ This action is **FINAL**. 2b)☒ This action is non-final.

3)☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

4)☒ Claim(s) *1-10 and 29-47* is/are pending in the application.

4a) Of the above claim(s) _____ is/are withdrawn from consideration.

5)☐ Claim(s) _____ is/are allowed.

6)☒ Claim(s) *1-10 and 29-47* is/are rejected.

7)☐ Claim(s) _____ is/are objected to.

8)☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

9)☐ The specification is objected to by the Examiner.

10)☒ The drawing(s) filed on *13 November 2003* is/are: a)☒ accepted or b)☐ objected to by the Examiner.

Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).

Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).

11)☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

12)☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).

a)☐ All b)☐ Some * c)☐ None of:

1.☐ Certified copies of the priority documents have been received.

2.☐ Certified copies of the priority documents have been received in Application No. _____.

3.☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

1) ☒ Notice of References Cited (PTO-892)
2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
3) ☐ Information Disclosure Statement(s) (PTO/SB/08) Paper No(s)/Mail Date _____.
4) ☐ Interview Summary (PTO-413) Paper No(s)/Mail Date. _____ .
5) ☐ Notice of Informal Patent Application
6) ☐ Other: _____.

DETAILED ACTION

Continued Examination Under 37 CFR 1.114

1. A request for continued examination under 37 CFR 1.114, including the fee set forth in 37 CFR 1.17(e), was filed in this application after final rejection. Since this application is eligible for continued examination under 37 CFR 1.114, and the fee set forth in 37 CFR 1.17(e) has been timely paid, the finality of the previous Office action has been withdrawn pursuant to 37 CFR 1.114. Applicant's submission filed on 01/14/2008 has been entered.

Claim Rejections - 35 USC § 102

2. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

> A person shall be entitled to a patent unless –
>
> (b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

3. Claims 1-10, 29-40, 42 and 43 are rejected under 35 U.S.C. 102(b) as being anticipated by Rodgers et al. (U.S. Pat. No. 6,493,650 B1).

Regarding claim 1, Rodgers et al. disclose: a surveying system for generating a computer model of a physical site (Abstract), the system comprising: a survey measurement device for determining a location of a selected feature relative to the survey measurement device (col. 5, lines 59-62; col. 6, lines 5-25); and a computer-aided drafting (CAD) module (col. 5, lines 62-64) configured to model the physical site (col. 7, lines 15-21) while sending control commands to the survey measurement device (col. 8, lines 40-45; col. 9, lines 53-56), the CAD module, including a CAD application

program installed on a computer for receiving from the survey measurement device data related to the location of the selected feature, and for creating a corresponding object in the computer model, and a bi-directional communication interface (i.e., the I/O interface card 12) between the CAD application program and the survey measurement device for communicating the control commands from the CAD application program to the survey measurement device (col. 6, lines 46-52; col. 8, lines 40-45; col. 9, lines 53-56) and for communicating the data related to the location of the selected feature from the survey measurement device to the CAD application program (col. 7, lines 15-21; cols. 5-6, lines 58-3; col. 6, lines 46-52; and col. 9, lines 5-13).

Regarding claim 2, Rodgers et al. disclose: wherein the computer includes an interactive display for enabling the operator to interact with the model at the survey site and enabling the operator to control the survey measurement device by use of a graphical user interface associated with the CAD module (cols. 9-10, lines 60-19).

Regarding claim 3, Rodgers et al. disclose: wherein the bi-directional communication interface includes a wireless link (col. 3, lines 30-33; col. 5, lines 62-67).

Regarding claim 4, Rodgers et al. disclose: wherein the bi-directional communication interface includes a cable link (Fig 1; col. 5, lines 62-67).

Regarding claim 5, Rodgers et al. disclose: wherein the survey measurement device comprises a total station (cols. 5-6, lines 58-3).

Regarding claim 6, Rodgers et al. disclose: wherein the survey measurement device comprises a hand held laser measurement device (col. 9, lines 29-42).

Regarding claim 7, Rodgers et al. disclose: wherein the survey measurement device comprises a global positioning system based device (cols. 5-6, lines 58-44).

Regarding claim 8, Rodgers et al. disclose: wherein the survey measurement device comprises a high definition scanner (col. 11, lines 8-25; col. 9, lines 9-11).

Regarding claim 9, Rodgers et al. disclose: wherein the location of the selected feature and the corresponding object are represented in two dimensions (cols. 9-10, lines 60-19).

Regarding claim 10, Rodgers et al. disclose: wherein the location of the selected feature and the corresponding object are represented in three dimensions (cols. 9-10, lines 60-19).

Regarding claim 29, Rodgers et al. disclose: a method of marking features at a site corresponding to objects in a computer 15 model (Abstract), the method comprising: selecting, through interaction with a graphical user interface (col. 7, lines 15-21 and lines 41-45) associated with a computer-aided drafting (CAD) module, an object in a computer model of the site pre-loaded into the CAD module, the object corresponding to a feature at the site (col. 7, lines 15-21; col. 9, lines 5-13; cols. 9-10, lines 60-19); transmitting real world coordinates of the feature from the CAD module to a survey measurement device (col. 3, lines 51-54; col. 6, lines 5-25 and lines 46-52; col. 10, lines 20-25 and 32-37); the CAD module commanding the survey measurement device to indicate a location of the feature (col. 8, lines 40-45; col. 9, lines 53-56); and marking the location (col. 10, lines 44-51).

Regarding claim 30, Rodgers et al. disclose: said CAD module includes a graphical user interface that enables a user to select an object identifier from a drop-down menu in the graphical user interface (col. 8, lines 57-60; cols. 9-10, 60-7).

Regarding claim 31, Rodgers et al. disclose: means for calculating error in measured feature locations (col. 5, lines 41-56).

Regarding claim 32, Rodgers et al. disclose: the CAD module further includes means for distributing the error amongst a plurality of measured feature locations (col. 5, lines 41-56; col. 8, lines 7-18).

Regarding claim 33, Rodgers et al. disclose: the CAD module includes means for creating layered models of the site and means for assigning attributes to the objects (cols. 9-10, lines 60-7).

Regarding claim 34, Rodgers et al. disclose: the CAD module determines attributes of the object in accordance with predetermined object choices (cols. 9-10, lines 60-7).

Regarding claim 35, Rodgers et al. disclose: the survey measurement device is robotically controlled (col. 6, lines 5-25) and the CAD module sends a positioning command to the survey measurement device to cause the survey measurement device to measure the feature (col. 6, lines 46-52).

Regarding claim 36, Rodgers et al. disclose: loading the CAD module with a set of plans or CAD files for the site (col. 9, lines 9-13; cols. 9-10, lines 60-7).

Regarding claim 37, Rodgers et al. disclose: setting up reference points at the site corresponding to reference objects in the computer model (cols. 9-10, lines 60-7).

Regarding claim 38, Rodgers et al. disclose: the CAD module is configured to receive the data related to the location of the selected feature and begin creation of the computer model while the survey measurement device collects additional data related to the location of the selected feature (col. 6, lines 9-13 and lines 46-52; col. 7, lines 15-21; col. 8, lines 40-45; col. 9, lines 5-13; col. 10, lines 20-31).

Regarding claim 39, Rodgers et al. disclose: the survey measurement device is configured to communicate the data related to the location of the selected feature to the CAD application as measurements of the data related to the location of the selected feature are made by the survey measurement device (col. 10, lines 20-25).

Regarding claim 40, Rodgers et al. disclose: the CAD application is configured to receive control commands from an operator and control the survey measurement device using the control commands received from the operator (col. 8, lines 40-45; col. 9, lines 53-56).

Regarding claim 42, Rodgers et al. disclose: the CAD application is configured to trigger operation of the survey measurement device (col. 8, lines 40-45; col. 9, lines 53-56).

Regarding claim 43, Rodgers et al. disclose: the CAD application is configured to sight the survey measurement device (col. 10, lines 30-40).

Claim Rejections - 35 USC § 103

4. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negatived by the manner in which the invention was made.

5. Claims 41 and 44-47 are rejected under 35 U.S.C. 103(a) as being unpatentable over Rodgers et al. in view of Dimsdale et al. (U.S. Pub. No. 20040051711).

Regarding claim 46, Rodgers et al. disclose: a surveying system for generating a computer model of a physical site (Abstract), the system comprising: a survey measurement device for determining a location of a selected feature relative to the survey measurement device (col. 5, lines 59-62; col. 6, lines 5-25); and a computer-aided drafting (CAD) module (col. 5, lines 62-64) configured to model the physical site (col. 7, lines 15-21) while sending control commands to the survey measurement device (col. 8, lines 40-45; col. 9, lines 53-56), the CAD module including a CAD application program installed on a computer for receiving from the survey measurement device data related to the location of the selected feature, and for creating a corresponding object in the computer model, and a bidirectional communication interface (i.e., the I/O interface card 12) between the CAD application program and the survey measurement device for communicating the control commands from the CAD application program to the survey measurement device (col. 6, lines 46-52; col. 8, lines 40-45) and for communicating the data related to the location of the selected feature from the survey measurement device to the CAD application program (col. 7, lines 15-21; cols. 5-6, lines 58-3; col. 6, lines 46-52; and col. 9, lines 5-13).

Rodgers et al. do not mention expressly: the CAD module is configured to send position control commands to the survey measurement device to control a position of the survey measurement device.

Dimsdale et al. disclose a surveying system for generating a computer model of a physical site (Abstract), the system comprising: a survey measurement device for determining a location of a selected feature relative to the survey measurement device (section 0012); and a computer-aided drafting (CAD) module configured to model the physical site (section 0012); wherein the CAD module is configured to send position control commands to the survey measurement device to control a position of the survey measurement device (sections 0036-0037; section 0168, lines 20-23).

It would have been obvious to one having ordinary skill in the art at the time the invention was made to modify the invention of Rodgers et al. as taught by Dimsdale et al. to configure the CAD module and structure the survey measurement device in such a way that said CAD module can send position control commands to the survey measurement device to control a position of the survey measurement device in order to make measurements following a user defined trajectory of the physical site or position the survey measurement device on demand (Dimsdale et al., section 0156).

Regarding claim 47, Rodgers et al. disclose: the CAD module is configured to receive the data related to the location of the selected feature and begin creation of the computer model while the survey measurement device collects additional data related to the location of the selected feature (col. 6, lines 9-13 and lines 46-52; col. 7, lines 15-21; col. 8, lines 40-45; col. 9, lines 5-13; col. 10, lines 20-31).

Regarding claims 41 and 44, Rodgers et al. disclose the surveying system for generating a computer model of a physical site including the subject matter discussed above except: with respect to claim 41, the CAD module is configured to control a position of the survey measurement device; with respect to claim 44, the CAD application is configured to reposition the survey measurement device to measure an additional feature at the survey site.

Dimsdale et al. disclose a surveying system for generating a computer model of a physical site (Abstract), the system comprising: a survey measurement device for determining a location of a selected feature relative to the survey measurement device (section 0012); and a computer-aided drafting (CAD) module configured to model the physical site (section 0012); wherein the CAD module is configured to control a position of the survey measurement device (sections 0036-0037; section 0168, lines 20-23); and the CAD application is configured to reposition the survey measurement device to measure an additional feature at the survey site (sections 0036-0037; section 0168, lines 20-23).

It would have been obvious to one having ordinary skill in the art at the time the invention was made to modify the invention of Rodgers et al. as taught by Dimsdale et al. to configure the CAD module and structure the survey measurement device in such a way that said CAD module can send position control commands to the survey measurement device to control a position of the survey measurement device in order to make measurements following a user defined trajectory of the physical site or position the survey measurement device on demand (Dimsdale et al., section 0156).

Regarding claim 45, Rodgers et al. disclose the surveying system for generating a computer model of a physical site including the subject matter discussed above. Rodgers et al. further disclose: the survey measurement device receives (col. 6, lines 5-9) coordinates of a feature and automatically indicates the corresponding location at the site by sighting the survey measurement device at the selected point (col. 9, lines 20-23; col. 10. lines 20-25).

Rodgers et al. do not mention expressly: the survey measurement device is motorized.

The teaching of Dimsdale et al. includes: the survey measurement device is motorized and receives coordinates of a feature (sections 0036-0037; section 0168, lines 20-23; section 0228).

It would have been obvious to one having ordinary skill in the art at the time the invention was made to modify the invention of Rodgers et al. as taught by Dimsdale et al. to configure the CAD module and structure the survey measurement device in such a way that said CAD module can send position control commands to the survey measurement device to control a position of the survey measurement device in order to make measurements following a user defined trajectory of the physical site or position the survey measurement device on demand (Dimsdale et al., section 0156).

Response to Arguments

6. Applicant's arguments received 12/31/07 with respect to claims 1-10 and 29-47 have been considered but are moot in view of the new ground(s) of rejection.

Claims 1-10 and 29-47 are rejected as new grounds have been found from the Rodgers patent and a new prior art reference (U.S. Pub. No. 20040051711 to Dimsdale et al.) to teach, either individually or in combination, the claimed invention recited in these claims. Detailed response is given in sections 2-5 as set forth above in this Office action.

Applicant argued that Rodgers does not disclose that the CAD program is "configured to model the physical site while sending control commands to the survey measurement device …". Applicant further argued that Rodgers does not disclose that a CAD module commands "a survey measurement device to indicate a location of the feature..." These arguments are not persuasive. The Examiner's position is that, giving the claims the broadest reasonable interpretation, the Rodgers patent does disclose or teach or suggest all the subject matters recited in claims 1 and 29. In particular, Rodgers et al. disclose: a computer-aided drafting (CAD) module (col. 5, lines 62-64) configured to model the physical site (col. 7, lines 15-21) while sending control commands to the survey measurement device (col. 8, lines 40-45; col. 9, lines 53-56), as recited in claim 1; and the CAD module commanding the survey measurement device to indicate a location of the feature (col. 8, lines 40-45; col. 9, lines 53-56), as recited in claim 29.

Applicants' arguments regarding the dependent claims are reliant upon the issue discussed above, and are deemed to be non-persuasive as well for the reasons provided above for independent claims 1 and 29.

Contact Information

7. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Xiuqin Sun whose telephone number is (571)272-2280. The examiner can normally be reached on 6:30am-4:00pm.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, John Barlow can be reached on (571)272-2269. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see http://pair-direct.uspto.gov. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

/X. S./
Examiner, Art Unit 2863

/John E Barlow Jr./
Supervisory Patent Examiner, Art Unit 2863

March 26, 2008